

**IN THE CLAIMS**

Please cancel claims 1 – 36 and 47 – 50.

Please amend the claims to read as indicated herein.

1 – 36. (canceled)

37. (currently amended) A system for pumping thermal energy, comprising:  
a heater for heating a liquid;  
a gas-liquid contactor for adding vapor from said liquid to a process gas to produce a vapor-containing gas; and  
a membrane permeator for removing said vapor from said vapor-containing gas and for  
providing a resultant vapor;  
wherein said system transfers a quantity of thermal energy from said heater to said resultant  
vapor.

38. (original) The system of claim 37, further comprising a heat exchanger through which  
said resultant vapor is routed for heating a media.

39. (original) The system of claim 38, wherein said resultant vapor heats said media by  
condensation and releases latent heat.

40. (original) The system of claim 37,  
wherein said vapor permeates from a feed side of said membrane permeator to a permeate  
side of said membrane permeator, and  
wherein said system further comprises an arrangement for increasing a driving force  
between said feed side and said permeate side.

Preliminary Amendment

41. (original) The system of claim 40, wherein said arrangement employs a technique selected from the group consisting of (a) sweeping a dry gas proximate to said permeate side, (b) applying a vacuum to said permeate side, and (c) allowing a portion of said vapor-containing gas to permeate said membrane.

42. (original) The system of claim 37,  
wherein said membrane permeator discharges a retentate gas, and  
wherein said arrangement refluxes a portion of said retentate gas into said permeate side.

43. (original) The system of claim 37,  
wherein said heater comprises a heat exchanger for transferring heat from a waste heat source to said liquid, and  
wherein said quantity of thermal energy comprises thermal energy from a source selected from the group consisting of (a) a waste heat, (b) solar heat, (c) low level heat, (d) a furnace, (e) flue gas, (f) geothermal heat, (g) steam, (h) hot water, (i) burning fuel, (j) burning gas, (k) electrical and (l) geothermal.

44. (original) The system of claim 37, further comprising a heat exchanger for transferring energy between said vapor-containing gas and said liquid, before said liquid enters said gas-liquid contactor and after said vapor-containing gas exits from said gas-liquid contactor.

45. (original) The system of claim 37, further comprising a heat exchanger for transferring energy between said process gas and said liquid, before said process gas enters said gas-liquid contactor and after said liquid exits from said gas-liquid contactor.

46. (original) The system of claim 37, wherein said gas-liquid contactor comprises a unit selected from the group consisting of (a) cooling tower, (b) a spray contactor, (c) an atomizing contactor, (d) a dripping contactor, (e) a sprinkler contactor, (f) a wet pad contactor, (g) a packed

Preliminary Amendment

column, (h) a plates column, (i) a baffle tower, (j) a membrane contactor, (k) a humidifier, (l) an evaporator and (m) a flash evaporator.

47 – 50. (canceled)